

What is claimed is:

1. An optical receiver for receiving an RZ-duobinary optical signal at a bit rate B bits per second, the receiver comprising:
 - 5 an optical bandpass filter responsive to the RZ-duobinary optical signal for filtering the signal within a passband of B Hz; and
 - an optical detector for recovering data from the filtered RZ-duobinary optical signal.
- 10 2. The optical receiver as defined in claim 1 wherein a center frequency of the optical bandpass filtered is detuned from a center frequency of the RZ-duobinary optical signal by an amount less than or equal to $\pm 0.1 \times B$.
- 15 3. An optical receiver for receiving an RZ-duobinary optical signal at a bit rate B bits per second, the receiver comprising:
 - an optical bandpass filter responsive to the RZ-duobinary optical signal for filtering the signal within a passband having a bandwidth greater than or equal to $0.7 \times B$ Hz and less than or equal to $1.3 \times B$ Hz; and
 - an optical detector for recovering data from the filtered RZ-duobinary optical signal.
- 20 4. A method for receiving a duobinary optical signal having a data bit rate of B bits per second, the method comprising the steps of:
 - bandpass filtering the signal through a passband substantially equal to B Hz; and
 - recovering data from the filtered signal, wherein the signal conforms to an RZ-duobinary signaling format.
- 25 5. The method as defined in claim 4 wherein a center frequency of the optical bandpass filtered is detuned from a center frequency of the RZ-duobinary optical signal by an amount less than or equal to $\pm 0.1 \times B$.

6. A method for receiving a duobinary optical signal having a data bit rate of B bits per second, the method comprising the steps of:

bandpass filtering the signal through a passband having a bandwidth greater than or equal to $0.7 \times B$ Hz and less than or equal to $1.3 \times B$ Hz; and

5 recovering data from the filtered signal, wherein the signal conforms to an RZ-duobinary signaling format.

7. An optical transmission system comprising:

an optical transmitter for generating an RZ-duobinary optical signal at a 10 bit rate B bits per second;

an optical transmission medium coupled to the optical transmitter for supporting propagation the RZ-duobinary optical signal;

an optical bandpass filter coupled to an output of the optical transmission medium and being responsive to the RZ-duobinary optical signal for filtering the 15 signal within a passband of B Hz; and

an optical detector for recovering data from the filtered RZ-duobinary optical signal.

8. The optical transmission system as defined in claim 7 wherein a center 20 frequency of the optical bandpass filter is detuned from a center frequency of the RZ-duobinary optical signal by an amount less than or equal to $\pm 0.1 \times B$.

9. An optical transmission system comprising:

an optical transmitter for generating an RZ-duobinary optical signal at a 25 bit rate B bits per second;

an optical transmission medium coupled to the optical transmitter for supporting propagation the RZ-duobinary optical signal;

an optical bandpass filter coupled to an output of the optical transmission medium and being responsive to the RZ-duobinary optical signal for filtering the 30 signal within a passband having a bandwidth greater than or equal to $0.7 \times B$ Hz and less than or equal to $1.3 \times B$ Hz; and

an optical detector for recovering data from the filtered RZ-duobinary optical signal.